

WHAT IS CLAIMED IS:

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AN
1. An overvoltage protection circuit for interposing between an input voltage and a supply voltage, the overvoltage protection circuit comprising:
- 5 switch circuitry connected to and passing current between an input voltage node and a supply voltage node, the input voltage node corresponding to the input voltage and the supply voltage node corresponding to the supply voltage; and
- switch control circuitry for sensing the supply voltage and regulating current flow through the switch circuitry in response thereto.
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2. The overvoltage protection circuit of claim 1 wherein the switch circuitry comprises at least one transistor connected between the input voltage node and the supply voltage node.
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3. The overvoltage protection circuit of claim 2 wherein the at least one transistor comprises at least one P-type MOSFET.
4. The overvoltage protection circuit of claim 2 wherein the at least one transistor comprises at least one N-type MOSFET.
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5. The overvoltage protection circuit of claim 2 wherein the at least one transistor comprises a plurality of transistor configured in parallel.
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6. The overvoltage protection circuit of claim 2 wherein the at least one transistor comprises a single transistor.

7. The overvoltage protection circuit of claim 1 wherein the switch control circuitry comprises a resistor divider for sensing the supply voltage.

8. The overvoltage protection circuit of claim 1 wherein the switch control circuitry comprises a voltage controlled current source for providing a control signal to the switch circuitry.

9. The overvoltage protection circuit of claim 8 wherein the voltage controlled current source comprises a voltage regulator.

10. An overvoltage protection circuit for interposing between an input voltage and a supply voltage, the overvoltage protection circuit comprising:  
switch circuitry connected to and passing current between an input voltage node and a supply voltage node, the input voltage node corresponding to the input voltage and the supply voltage node corresponding to the supply voltage, the switch circuitry comprising at least one transistor connected between the input voltage node and the supply voltage node; and

switch control circuitry for sensing the supply voltage and regulating current flow through the switch circuitry in response thereto, the switch control circuitry comprising a voltage controlled current source for providing gate drive to the at least one transistor.

11. An amplifier, comprising:  
amplifier circuitry for amplifying an input signal; and

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overvoltage protection circuitry for interposing between an input voltage and an amplifier supply voltage, the amplifier supply voltage providing power to the amplifier circuitry, the overvoltage protection circuitry comprising,

switch circuitry connected to and passing current between an input  
5 voltage node and an amplifier supply voltage node, the input voltage node corresponding to the input voltage and the amplifier supply voltage node corresponding to the amplifier supply voltage; and

switch control circuitry for sensing the amplifier supply voltage and regulating current flow through the switch circuitry in response thereto.

10 12. An automotive audio system, comprising:

audio amplifier circuitry for amplifying an audio input signal; and

overvoltage protection circuitry for interposing between a vehicle battery voltage and an amplifier supply voltage, the amplifier supply voltage providing power to the amplifier  
15 circuitry, the overvoltage protection circuitry comprising,

switch circuitry connected to and passing current between vehicle  
battery voltage node and an amplifier supply voltage node, the vehicle  
battery voltage node corresponding to the vehicle battery voltage and the  
amplifier supply voltage node corresponding to the amplifier supply voltage;  
20 and

switch control circuitry for sensing the amplifier supply voltage and regulating current flow through the switch circuitry in response thereto.